

Variation in Plantar Tubercles in *Peromyscus polionotus*

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IN the cricetine genus *Peromyscus* the plantar tubercles on the hind foot number 5 in the subgenus *Podomys*, whereas all other subgenera of *Peromyscus* are characterized by 6 pads on the hind foot (Blair et al., 1957; Hall and Kelson, 1959). *Podomys* contains a single species, *Peromyscus floridanus* (Chapman), whose distribution is restricted to Florida. Data presented below, however, indicate that the beach mouse, *Peromyscus* (*Peromyscus*) *polionotus* (Wagner), sometimes has only 5 plantar tubercles.

The feet of approximately 300 live or recently killed *P. polionotus* were examined with the unaided eye. Forty-six specimens came from the Ocala National Forest, Marion County, Florida, and the rest came from other localities in Florida, Georgia, and South Carolina. Any specimen suspected of having 5 tubercles was also examined by dissecting microscope.

All of the plantar tubercles were variable in size but the outer posterior one was completely lacking on some specimens. Without magnification, 30 of the 46 specimens from the Ocala National Forest appeared to have 6 tubercles on both feet; ten had 6 on one foot and 5 on the other, and six had 5 on both feet. Microscopic examination showed the presence of a slight protuberance in the approximate position of the posterior tubercle on some of the feet which appeared to have only 5 tubercles. Of the 46 animals thus examined, three had only 5 tubercles on each foot, four others had 6 on one foot and 5 on the other, and the remaining specimens showed 6 on each foot.

Of the 254 remaining animals from other localities, 50 were also examined by another person who was equally aware of the variation in this character. It was found that we disagreed on the number of tubercles on 20 per cent of the specimens. The geographical variation of this trait cannot be determined objectively until a quantitative measure is devised so that the minimum size of what constitutes a tubercle can be well defined. However, some specimens from other localities in Florida, Georgia, and South Carolina seemed to have only 5 plantar tubercles even when examined microscopically. Thus it is clear that *P. polionotus* cannot be distinguished from *P. floridanus* by the number of tuber-

cles on the hind feet. It is surprising that this character was ever used as a diagnostic tool, since variation in the sixth plantar tubercle was first pointed out by Osgood in his revision of the genus *Peromyscus* (1909).

Peromyscus polionotus is the smallest *Peromyscus* in the United States and thus can be easily distinguished from *P. floridanus*, which is one of the largest species. No overlap occurs in the size of the ear, hind foot, body, or tail of adult mice of the two species. For example, the hind foot ranges from 25-27 mm in *P. floridanus*, 15-19 mm in *P. polionotus* (Blair et al., 1957). The bacula of the two species are also easily distinguished (Blair, 1942). A clear and concise key to the species of *Peromyscus* should be constructed without reference to the number of plantar tubercles as a key character to separate these two species. A taxonomic revision is not needed because the subgeneric status of *Podomys* is primarily based upon morphological differences other than the number of plantar tubercles (Hooper and Musser, 1964).

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